

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 2 of 20

Attorney's Docket No.: 12557-009001

Amendments to the Claims:

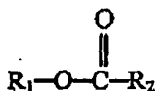
This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-21. (Canceled).

22. (Currently amended) A method for control of unwanted nematodes, the method comprising administering to mammals, plants, seeds or soil a nematicidal composition comprising:

(a) an effective amount of a compound having the formula



wherein:

R₁ = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 3 of 20

Attorney's Docket No.: 12557-009001

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;

R₂ = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl carbon and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy; and

(b) an aqueous surfactant.

23. (Currently amended) The method of claim 22 wherein R₁ = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and an unsubstituted C1-C2 carbon chain~~

Applicant : Deryck Jeremy Williams et al.

Attorney's Docket No.: 12557-009001

Serial No. : 10/090,527

Filed : March 4, 2002

Page : 4 of 20

i) hydroxy,ii) halogen,iii) amino,iv) cyano,v) cyclopropane,vi) cyclopropene,vii) epoxy, andviii) an unsubstituted C1-C2 carbon chain.

24. (Currently amended) The method of claim 22 wherein R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and an unsubstituted C1-C2 carbon chain~~

i) hydroxy,ii) halogen,iii) amino,iv) cyano,v) cyclopropane,vi) cyclopropene,vii) epoxy, andviii) an unsubstituted C1-C2 carbon chain.

25-28. (Canceled).

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 5 of 20

Attorney's Docket No.: 12557-009001

29. (Previously Presented) The method of claim 22 wherein R_1 is a C1-C2 substituted or unsubstituted carbon chain.

30. (Previously Presented) The method of claim 22 wherein R_2 is substituted only at one or both of 12th and 13th carbons.

31. (Previously Presented) The method of claim 22 wherein R_2 is substituted only at the 12th carbon.

32-33. (Canceled).

34. (Currently amended) The method of claim 22 wherein within R_2 the substituents are selected from the group consisting of: ~~hydroxy, epoxy, and a C1 alkyl~~

i) hydroxy.

ii) epoxy, and

iii) a C1 alkyl.

35. (Original) A method for control of unwanted nematodes, the method comprising administering to mammals, plants, seeds or soil a nematocidal composition comprising an effective amount of:

- (a) a fatty acid methyl ester selected from the group consisting of: ricinoleic acid methyl ester, crepenynic acid methyl ester, and vernolic acid methyl ester; and
- (b) an aqueous surfactant.

36. (Previously Presented) The method of claim 22 or claim 35 wherein the aqueous surfactant is selected from the group consisting of: ethyl lactate, polyoxyethylene sorbitan 20 monolaureate, polyoxyethylene 9 nonylphenyl ether.

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 6 of 20

Attorney's Docket No.: 12557-009001

37. (Original) The method of claim 22 or claim 35 wherein the composition further comprises:

(c) a permeation enhancer.

38. (Original) The method of claim 37 wherein the permeation enhancer is a cyclodextrin.

39. (Original) The method of claim 22 or 35 wherein the composition comprises:

(c) a co-solvent.

40. (Original) The method of claim 39 wherein the co-solvent is isopropanol.

41. (Original) The method of claim 22 or claim 35 further comprising administering a nematocide selected from the group consisting of: avermectins, ivermectin, and milbemycin.

42. (Original) The method of claim 22 wherein the nematode infects plants and the nematocidal composition is applied to the soil or to plants.

43. (Original) The method of claim 42 wherein the nematocidal composition is applied to soil before planting.

44. (Original) The method according to claim 42 where the nematocidal composition is applied to soil after planting.

45. (Original) The method of claim 42 wherein the nematocidal composition is applied to soil using a drip system.

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 7 of 20

Attorney's Docket No.: 12557-009001

46. (Original) The method of claim 42 wherein the nematocidal composition is applied to soil using a drench system.

47. (Original) The method of claim 42 wherein the nematocidal composition is applied to plant roots.

48. (Original) The method of claim 22 wherein the nematocidal composition is applied to seeds.

49. (Original) The method of claim 22 wherein the nematode infects a mammal.

50. (Original) The method of claim 22 wherein the nematocidal composition is administered to non-human mammal.

51. (Original) The method of claim 22 wherein the nematocidal composition is administered to a human.

52. (Original) The method of claim 50 wherein the nematocidal composition is formulated as a drench to be administered to a non-human animal.

53. (Original) The method of claim 49 wherein the nematocidal composition is formulated as an orally administered drug.

54. (Original) The method of claim 49 wherein the nematocidal composition is formulated as an injectable drug.

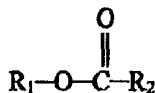
55-66. (Canceled).

Applicant : Deryck Jeremy Williams et al.
 Serial No. : 10/090,527
 Filed : March 4, 2002
 Page : 8 of 20

Attorney's Docket No.: 12557-009001

67. (Currently amended) A nematicidal composition comprising:

(a) an effective amount of a compound having the formula



wherein:

R_1 = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a C1-C2 substituted or unsubstituted carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy; and

R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl carbon and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a substituted or unsubstituted C1-C2 carbon~~

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 9 of 20

Attorney's Docket No.: 12557-009001

chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;

(b) an aqueous surfactant; and

(c) a nematicide selected from the group consisting of: avermectins, ivermectin, and milbemycin.

68. (Previously presented) The composition of claim 67 wherein the aqueous surfactant is selected from the group consisting of: ethyl lactate, polyoxyethylene 20 sorbitan monolaureate, polyoxyethylene 9 nonylphenyl ether.

69. (Previously presented) The composition of claim 67 further comprising a permeation enhancer.

70. (Previously presented) The composition of claim 67 further comprising a co-solvent.

71. (Previously presented) The nematicidal composition of claim 70 wherein the co-solvent is isopropanol.

Applicant : Deryck Jeremy Williams et al.

Attorney's Docket No.: 12557-009001

Serial No. : 10/090,527

Filed : March 4, 2002

Page : 10 of 20

72. (Currently amended) The nematocidal composition of claim 67 wherein R_1 = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a singly or multiply substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy~~

- i) hydroxy,
- ii) halogen,
- iii) amino,
- iv) cyano,
- v) cyclopropane,
- vi) cyclopropene,
- vii) epoxy, and
- viii) an C1-C2 carbon chain.

73. (Currently amended) The nematocidal composition of claim 67 wherein R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl carbon and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and an unsubstituted C1-C2 carbon chain~~

- i) hydroxy,
- ii) halogen,
- iii) amino,
- iv) cyano,
- v) cyclopropane,

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 11 of 20

Attorney's Docket No.: 12557-009001

vi) cyclopropene,

vii) epoxy, and

viii) an unsubstituted C1-C2 carbon chain.

74. (Previously presented) The nematocidal composition of claim 67 wherein R₁ is a C1-C2 substituted or unsubstituted carbon chain.

75. (Previously presented) The nematocidal composition of claim 67 wherein R₂ is substituted only at one or both of 12th and 13th carbons counting from the carbonyl carbon.

76. (Previously presented) The nematocidal composition of claim 75 wherein R₂ is substituted only at the 12th carbon counting from the carbonyl carbon.

77. (Currently amended) The composition of claim 75 wherein within R₂ the substituents are selected from the group consisting of: ~~hydroxy, epoxy, and a C1-alkyl~~

i) hydroxy,

ii) epoxy, and

iii) a C1 alkyl.

78. (Previously presented) The nematocidal composition of any of claims 72-77 wherein the aqueous surfactant is selected from the group consisting of: ethyl lactate, polyoxyethylene 20 sorbitan monolaureate, polyoxyethylene 9 nonylphenyl ether.

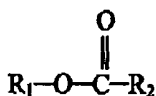
79. (Previously presented) The nematocidal composition of any of claims 72-77 further comprising a co-solvent.

80. (Currently amended) A nematocidal composition consisting essentially of:

(a) an effective amount of a compound having the formula

Applicant : Deryck Jeremy Williams et al.
 Serial No. : 10/090,527
 Filed : March 4, 2002
 Page : 12 of 20

Attorney's Docket No.: 12557-009001



wherein:

R_1 = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a C1-C2 substituted or unsubstituted carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy; and

R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl carbon and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy~~

i) hydroxy,

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 13 of 20

Attorney's Docket No.: 12557-009001

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy; and

(b) an aqueous surfactant selected from the group consisting of: ethyl lactate, polyoxyethylene 20 sorbitan monolaureate, polyoxyethylene 9 nonylphenyl ether.

81. (Currently amended) The nematocidal composition of claim 80 wherein R₁ = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a singly or multiply substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) an unsubstituted C1-C2 carbon chain.

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 14 of 20

Attorney's Docket No.: 12557-009001

82. (Currently amended) The nematicidal composition of claim 80 wherein R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl carbon and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and an unsubstituted C1-C2 carbon chain~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) an unsubstituted C1-C2 carbon chain.

83. (Previously presented) The composition of claim 80 wherein R_1 is a C1-C2 substituted or unsubstituted carbon chain.

84. (Previously presented) The composition of claim 80 wherein R_2 is substituted only at one or both of 12th and 13th carbons counting from the carbonyl carbon.

85. (Previously presented) The composition of claim 80 wherein R_2 is substituted only at the 12th carbon counting from the carbonyl carbon.

86. (Currently amended) The composition of claim 85 wherein within R_2 the substituents are selected from the group consisting of: ~~hydroxy, epoxy, and a C1-alkyl~~

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 15 of 20

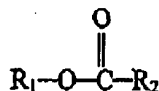
Attorney's Docket No.: 12557-009001

- i) hydroxy,
- ii) epoxy, and
- iii) a C1 alkyl.

87. (Canceled).

88. (Currently amended) A nematicidal feed for a non-human mammal comprising:

- (a) a feed selected from the group consisting of: soy, wheat, corn, sorghum, millet, alfalfa, clover, and rye;
- (b) an effective amount of a nematicidal compound having the formula



wherein:

R₁ = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy~~

- i) hydroxy,
- ii) halogen,
- iii) amino,
- iv) cyano,
- v) cyclopropane,
- vi) cyclopropene,
- vii) epoxy, and
- viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 16 of 20

Attorney's Docket No.: 12557-009001

and

R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons and either: (i) a triple bond between the 12th and 13th carbons or (ii) either a single or double bond between the 12th and 13th carbons and at least one substituent at one or both of the 12th and 13th carbons, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy;~~

i) hydroxy,

ii) halogen,

iii) amino,

iv) cyano,

v) cyclopropane,

vi) cyclopropene,

vii) epoxy, and

viii) a substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy; and

(c) an aqueous surfactant.

89. (Currently amended) The nematicidal feed of claim 88 wherein R_1 = a C1-C5 substituted or unsubstituted carbon chain, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and a singly or multiply substituted or unsubstituted C1-C2 carbon chain, wherein the substituents on the C1-C2 carbon chain are selected from the group consisting of hydroxy, halogen, amino, cyano, and epoxy~~ i) hydroxy,

ii) halogen,

iii) amino,

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 17 of 20

Attorney's Docket No.: 12557-009001

- iv) cyano,
- v) cyclopropane,
- vi) cyclopropene,
- vii) epoxy, and
- viii) an unsubstituted C1-C2 carbon chain.

90. (Currently amended) The nematicidal feed of claim 88 wherein R_2 = a C15-C19 substituted or unsubstituted carbon chain having a *cis* double bond between the 9th and 10th carbons counting from the carbonyl carbon and either: (i) a triple bond between the 12th and 13th carbons counting from the carbonyl carbon or (ii) either a single or double bond between the 12th and 13th carbons counting from the carbonyl carbon and at least one substituent at one or both of the 12th and 13th carbons counting from the carbonyl carbon, wherein the substituents are selected from the group consisting of: ~~hydroxy, halogen, amino, cyano, cyclopropane, cyclopropene, epoxy, and an unsubstituted C1-C2 carbon chain~~

- i) hydroxy,
- ii) halogen,
- iii) amino,
- iv) cyano,
- v) cyclopropane,
- vi) cyclopropene,
- vii) epoxy, and
- viii) an unsubstituted C1-C2 carbon chain.

91. (Previously presented) The nematicidal feed of claim 88 wherein R_1 is a C1-C2 substituted or unsubstituted carbon chain.

92. (Previously presented) The nematicidal feed of claim 88 wherein R_2 is substituted only at one or both of 12th and 13th carbons counting from the carbonyl carbon.

Applicant : Deryck Jeremy Williams et al.
Serial No. : 10/090,527
Filed : March 4, 2002
Page : 18 of 20

Attorney's Docket No.: 12557-009001

93. (Previously presented) The nematicidal feed of claim 92 wherein R_2 is substituted only at the 12th carbon counting from the carbonyl carbon.

94. (Currently amended) The nematicidal feed of claim 92 wherein within R_2 the substituents are selected from the group consisting of: ~~hydroxy, epoxy, and a C1 alkyl~~

- i) hydroxy,
- ii) epoxy, and
- iii) a C1 alkyl.

95. (Previously presented) A nematicidal feed for a non-human mammal comprising:

- (a) a feed that has been treated to reduce linoleic acid content, linolenic acid content or both;
- (b) a fatty acid methyl ester selected from the group consisting of: ricinoleic acid methyl ester, crepenynic acid methyl ester, and vernolic acid methyl ester; and
- (c) an aqueous surfactant.

96. (Previously presented) The nematicidal feed of claim 95 wherein both the gamma linolenic acid content and the alpha linolenic acid content have been reduced.

97. (Previously presented) A nematicidal feed for a non-human mammal comprising:

- (a) a feed selected from the group consisting of: soy, wheat, corn, sorghum, millet, alfalfa, clover, and rye;
- (b) a fatty acid methyl ester selected from the group consisting of: ricinoleic acid methyl ester, crepenynic acid methyl ester, and vernolic acid methyl ester; and
- (c) an aqueous surfactant.